January 5<sup>th</sup>, 2012

TO: Marlene H. Dortch, Secretary

**Federal Communications Commission** 

445 12th St. SW

Washington, DC 20554

Re: LightSquared Subsidiary, LLC

Ex Parte Communication. IB Docket No. 11-109

IBSF File No. SAT-MOD-20101118-00239

Dear Madam Dortch.

As a Professional Surveyor and constituent, I must express serious concerns about the FCC granting LightSquared LLC any approval (FCC File No. SAT-MOD-20101118-00239) to push forward with their initiative to build a nationwide 4G-LTE wireless broadband network. Early testing by GPS technology leaders Garmin and Trimble Navigation demonstrated that LightSquared's technology would likely interfere with GPS (Global Positioning System) receivers, degrading their performance in the best case scenario and completely jamming GPS receivers in the worst case scenario.

The Department of Defense, FAA, DHS, NASA, DOI, DOT, DOC, and the Professional Land Surveying and Engineering professions, have all expressed serious reservations in regards to this plan by LightSquared LLC company to build 40,000 ground stations in the U.S. that could cause widespread interference to GPS signals. This network of ground stations will transmit signals within the L-band frequency immediately adjacent to the GPS L1 frequency at more than one billion times the strength of the low-power GPS signal from space. Furthermore, each mobile phone using LightSquared's wireless service would potentially become a portable GPS jamming device by jamming GPS receivers in its immediate vicinity.

High-precision GPS equipment used by land surveyors, civil engineers, farmers, and other geomatics professionals costing thousands of dollars per receiver would be more adversely affected than the consumer GPS devices given their inherent design. Literally, tens of thousands of high-precision GPS receivers are used in the United States. GPS technology has transformed the way American's have built and managed our infrastructure, adding a tremendous level of efficiency to the design, construction, and maintenance of roads, bridges, commercial properties, residential subdivisions, parks, farms, golf courses, etc.

I use highly accurate GPS equipment everyday for my work as a land surveyor. GPS has become an essential tool for most land surveyors and geomatics professionals today and it is imperative that these GPS signals are not jeopardized by broadband technology. The FCC must make clear, and the NTIA (National Telecommunications and Information Administration) must ensure, that LightSquared's license modification is contingent on the outcome of the mandated study unequivocally demonstrating that there is no interference to GPS. The study must be comprehensive, objective, and based on correct assumptions about existing GPS uses rather than theoretical possibilities. Given the substantial pre-existing investment in GPS systems and infrastructure, and the critical nature of GPS applications, the results of the study must conclusively demonstrate there is no risk of interference. If there is conflicting evidence, doubts must be resolved against the LightSquared terrestrial system.

This situation has the potential of becoming a tremendous public safety issue and an economical disaster not only for the residents of Minnesota, but for the United States as a whole. Senators Pat Roberts and Ben Nelson have recently sent out a joint public letter to senate colleagues urging action on this matter to protect our Global Positioning System, please join with them in their effort. Best Regards,

Timothy J. Wotzka

Land Surveyor

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